

Bluestem Breezes
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The Year of the Cicadas

As the end of May approaches, we can expect for the emergence of those 17-year cicadas to occur. This week, K-State Entomologist Bob Bauernfeind walks us through the sounds we should expect and how to identify these insects:

By the end of May and into June, the “buzz” created by massive numbers of newly emerged 17-year periodical cicadas will create quite a “buzz” mainly amongst citizens of eastern Kansas.

With their distinctive appearance (black body, blood-red beady eyes and orange-veined clear/transparent wings), there can be no mistaking periodical cicadas for any other insect.

Whereas there is a tendency to lump/consider periodical cicadas as “one,” there actually are three separate species of 17-year periodical cicadas. Only *Magicicada cassinii* and *M. septendecim* have been officially documented as occurring in Kansas. Of the 4,437 periodicals that I collected from 37 counties in 1998, 98.7% were *cassinii*.

Without seeing an actual specimen, one can discern whether *cassinii* or *septendecim* is present. That is, the call produced by *cassinii* is a continuous or somewhat high-pitched buzzing possibly with some ticks interspersed, while the call of *septendecim* is a more hollow “weeeee whoa weeeee whoa

Probably the main complaints lodged by people against periodical cicadas have to do with the appearance of emergence holes in the ground, occasionally mud turrets produced by nymphs prior to their emergence, large number of nymphal exuvia (“skins”) from which adult cicadas emerged, and the noise created by the clusters of congregated males.

Also, the egg-laying activities can kill tips of branches, thus causing the appearance of dead branch tips which is but an aesthetical brief and inconsequential event.

All this being said, the 2015 emergence of Brood IV periodical cicadas (which includes portions of Iowa, Nebraska, Missouri and Oklahoma) was initiated in 1998 when 1st instar nymphs hatched, dropped to the ground and burrowed in. During the past 16 years, they fed by inserting their piercing, sucking mouthparts into the xylem tissues of tree and woody shrub hosts. The now fully-developed 5th instar nymphs currently are waiting for soil temperatures to reach the proper temperature (cited to be 64 degrees F) which signals them that the time has come that they should emerge from their underground habitat. After emerging, the skin down its back will split, and a “new adult” will emerge. Initially it will be white and soft. Over the next several hours, it will darken and take on its characteristic coloration. However, the exoskeleton will still be soft. An additional 4-5 days will be required for the exoskeleton to harden. It is at this point that cicadas will take flight, males will call, females will respond and mating will occur.

The female then will use her serrated ovipositor to slice into and create cavities in twigs into which she will insert up to 20 eggs. She will repeat this activity as many times as is required for her to deposit her full complement of eggs which may total up to 600. Six to 10 weeks later (a time at which all of the periodical cicadas will have died), the newly hatched nymphs drop to the soil burrow into the ground, feed for 16 years and reappear/emerge in 2032!

For any additional information, visit the Extension Office (215 Kansas, Courthouse, Alma; kamayer@ksu.edu; 765-3821). For Bluestem Breezes archives, check out wabaunsee.ksu.edu.